ABSTRACT

A method for measuring the duty cycle of a signal. The method is fast enough to allow duty cycle measurements of semi-conductor components during production. The method can also be performed inexpensively using automatic test equipment. A comparator in a digital channel is used to sense the state of an input signal at multiple points across the period of the signal. Fail processing circuitry within the tester is used to count the number of samples for which the input signal is in a logic HI state. This value is scaled by the total number of samples taken to produce a single number indicative of the duty cycle of the signal.